

Introducing Global Software Development in Turkey – Why and How?

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In the global context, the software sector has gained importance and this trend seems to continue in many countries. Based on our literature study it appears that the software sector in Turkey is also growing. There are more than 35 large companies operating in the software market in Turkey. The quality of Turkish software companies is increasing each year. A growing number of software companies have obtained at least the CMMI Level 3 rating. Over the last years, Turkish software companies have also started to export software to almost 70 countries.

In contrast to the current potential workforce and economical growth of Turkey the last years, the minor role of Turkish software sector in the global arena indicates a clear missed chance, both for Turkey itself and for supplier countries. With a population of more than 75 million, Turkey has a wide range of business expertise in diverse sectors such as automotive, textile, finance, tourism, defense, healthcare, agriculture, telecommunications, and machinery. Several of these sectors are quite successful and are currently visible on the global market. Pioneer organizations in these sectors also created an IT demand for their products. Despite the positive developments in these sectors and its impact on the IT and software sector, more systematic approaches and strategies are required to boost the software industry in Turkey at the global level. For this we propose a systematic strategy as shown in figure 1.

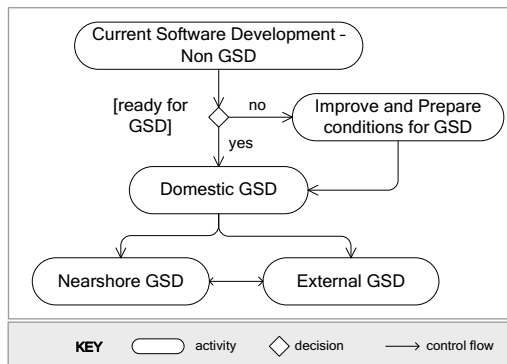


Figure 1. Roadmap for applying GSD in Turkey

In order to transition to GSD, it is required that the necessary conditions are fulfilled. For this, the criteria as given by the so-called *Global Services Location Index* (GSLI) can be used. The GSLI analyzes and ranks the countries worldwide as the destinations for outsourcing activities. Once the conditions as given by GSLI are met, we suggest applying domestic GSD in which the development

units are located in Turkey. This will increase the experience in both (1) setting up an outsourcing project, and (2) providing the outsourcing activity. Further, this will pave the way for starting the outsourcing to external markets and/or receiving outsourcing from external countries. In this context, the development effort may be partially moved to less industrialized cities with high expertise on IT supported by Universities and Technology Development Zones (TDZ). TDZs are areas designed to support R&D activities and attract investments in high technology fields. There are 39 TDZs in Turkey, of which 27 are operational and 12 have been approved and are currently under construction. In order to regulate the support of Research and Development activities as sources of innovations in production major tax advantages are provided to companies operating in TDZs. Figure 2 shows the map of Turkey with the currently 39 TDZs.



Figure 2. Technology Development Zones in Turkey

The following step will be to use *Nearshore GSD* in which the GSD is realized outside of Turkey with countries that are geographically or culturally close. This will require solving new challenges related to communication, coordination and control of the activities. In the last step *External GSD*, the GSD relates to global collaboration. Hereby companies from outside of Turkey outsource their development to organizations in Turkey. The other alternative is that Turkish companies initiate the GSD. In the end, both alternatives will create a win-win situation for the involved stakeholders.

Obviously, the GSD project as such cannot be successful if the corresponding stakeholders do not take their responsibility. In this context the government, the universities, and the software sector companies have to explicitly consider GSD as an important issue that is waiting to be explored for Turkey. In alignment with these ideas in this paper, for our future work we aim to organize academic and industrial events to foster the discussion around this important topic and likewise form a vision that is broadly adopted.